



## Specifications Approval Sheet

CUSTOMER: \_\_\_\_\_

CUSTOMER P/N: \_\_\_\_\_

PART NAME: \_\_\_\_\_ NTC Temperature Sensor

PART NUMBER: \_\_\_\_\_ OTS-OS-E-505-OTSV3011

DATE: \_\_\_\_\_

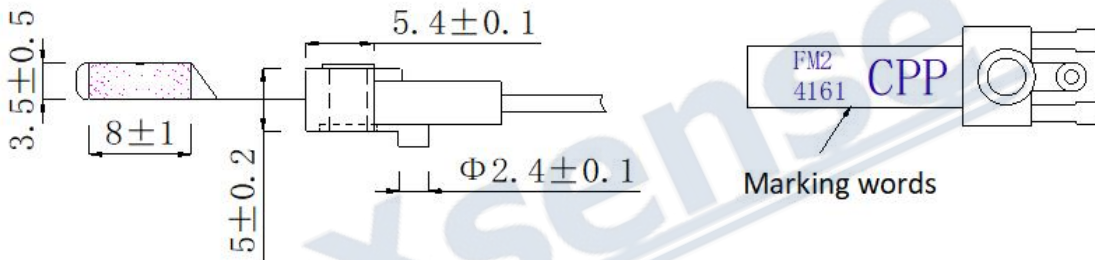
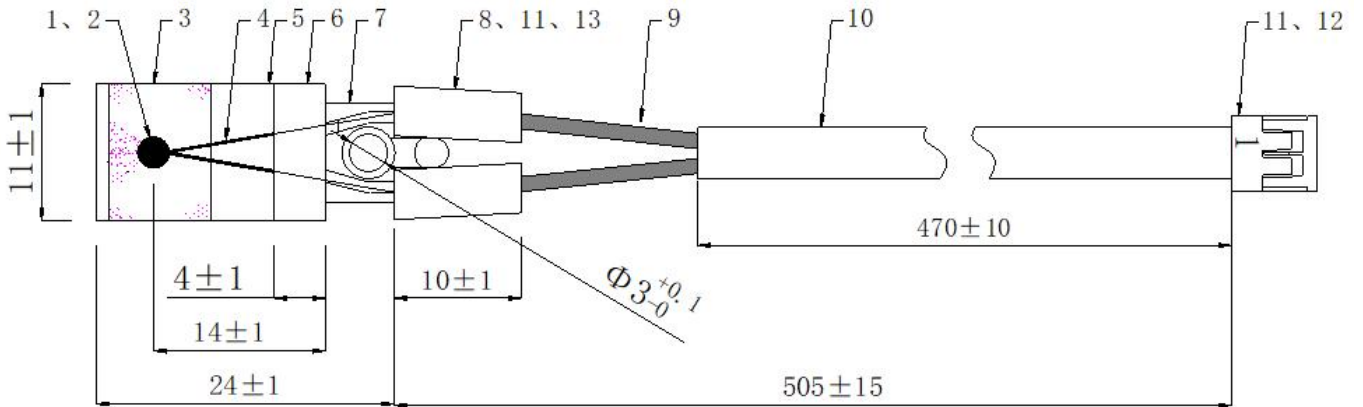
Manufacturer:

拟制 Draft	审核 Check	批准 Approval	印章 Stamp

For Customer Approval:

1. Structure, Dimensions & Materials

mm



NO	Material	Specification
1	Thermistor	R100=3.3KΩ ±3% B(0/100)=3930K±3%
2	Copper foil chip	Φ2.5
3	Sponge Foam	Color: orange
4	Tube	Polyimide, amber color
5	Polyimide film	Brown
6	Polyimide film	Brown
7	Injection moulding	OS#2.0 printed with marking words: CPP
8	Silicon tube	White
9	Wire	NUL #26AWG, color: grey, printed with black color words
10	Silicon tube	White
11	Terminal	AMP179609-1
12	Connector	Color: yellow
13	Epoxy	Color: black

## 2. Part Number Identification

<b>OTS</b>		<b>OS</b>		<b>E</b>		<b>-</b>		<b>505</b>	
①		②		③		④			

① Product Series Code		② Product shape		③ Product resistance and B-value		④ Total length of product	
OTS	OA temperature sensor	OS	S type	E	R100=3.3K Ω ±3% B(0/100)=3930K ±3%	505	505mm

## 3. Electronic Parameter Specification

No.	Item	Symbol	Test condition	Min.	Nor.	Max.	Unit
3-1	Resistance @25°C	R <sub>25</sub>	T <sub>a</sub> =25±0.05°C P <sub>T</sub> ≦0.1mw	3.201	3.3	3.399	KΩ
3-2	B-value	B <sub>0/100</sub>	$B = LN \frac{R_{T1}}{R_{T2}} / (\frac{1}{T1} - \frac{1}{T2})$	3812.1	3930	4047.9	K
3-3	Thermal time constant	τ		/	/	5	Sec
3-4	Dissipation factor	δ		0.3	/	/	mw/°C
3-5	Operating temp. range	/	/	0	/	+230	°C

## 4. Reliability Characteristics

No.	Item	Requirement	Testing method and condition
4-1	Tension between steel sheet and wire	No fault	Apply longitudinal tension ≥20N to the joint of steel sheet and wire
4-2	Tension between Terminal and wire	No fault	Apply longitudinal tension ≥20N to the joint of terminal and wire
4-3	Tension of thermistor	No fault	Apply longitudinal tension ≥5N to the joint of steel and dumet

 <b>肇慶愛晟傳感器技術有限公司</b>	Serial No. :
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## 5. Storage & Packing method

- 1) The height of each pile should be no more than 4 levels during storage and transportation.
  - 2) Protect it from the rain, snow and mechanical damage.
  - 3) 10PCS/bundle, 50PCS/bag, batch serial number of production and ROHS 2.0 label should be placed in each packing bag. Vacuum packing, self-adhesive label should be pasted outside.
  - 4) Should not close to the acidoid, alkali and corrosion gas or radioactive source.
- Storage temperature: 15°C~40°C, working humidity ≤75%.



**6、R-T table**

Part No.: OTS-OS-E-505-OTSV3011

 $R100=3.3K\Omega \pm 3\%$      $B(0/100)=3930K \pm 3\%$ 

Temp(°C)	Rmin(KΩ)	Rnor(KΩ)	Rmax(KΩ)	Temp(°C)	Rmin(KΩ)	Rnor(KΩ)	Rmax(KΩ)
0	136.0	157.4	182.1	43	21.72	23.76	25.97
1	129.6	149.8	173.0	44	20.92	22.85	24.95
2	123.5	142.6	164.4	45	20.15	21.99	23.97
3	117.8	135.8	156.3	46	19.41	21.16	23.04
4	112.4	129.3	148.7	47	18.70	20.36	22.15
5	107.2	123.2	141.5	48	18.02	19.60	21.29
6	102.3	117.4	134.6	49	17.37	18.87	20.48
7	97.71	112.0	128.2	50	16.75	18.17	19.70
8	93.31	106.8	122.1	51	16.14	17.49	18.94
9	89.13	101.8	116.3	52	15.56	16.85	18.22
10	85.16	97.18	110.8	53	15.00	16.23	17.53
11	81.40	92.75	105.6	54	14.47	15.63	16.87
12	77.82	88.54	100.7	55	13.96	15.06	16.23
13	74.41	84.55	95.99	56	13.46	14.51	15.62
14	71.18	80.77	91.56	57	12.99	13.98	15.04
15	68.10	77.17	87.37	58	12.53	13.48	14.48
16	65.17	73.75	83.38	59	12.10	12.99	13.94
17	62.39	70.50	79.60	60	11.67	12.53	13.43
18	59.73	67.42	76.02	61	11.27	12.08	12.94
19	57.21	64.48	72.61	62	10.88	11.65	12.46
20	54.80	61.69	69.37	63	10.51	11.24	12.01
21	52.51	59.03	66.30	64	10.15	10.84	11.57
22	50.33	56.50	63.37	65	9.802	10.46	11.15
23	48.25	54.09	60.59	66	9.469	10.09	10.75
24	46.26	51.80	57.95	67	9.149	9.743	10.37
25	44.37	49.62	55.44	68	8.840	9.405	10.00
26	42.57	47.54	53.05	69	8.544	9.079	9.640
27	40.85	45.56	50.77	70	8.258	8.767	9.298
28	39.20	43.67	48.60	71	7.983	8.466	8.970
29	37.63	41.87	46.54	72	7.718	8.176	8.654
30	36.13	40.15	44.58	73	7.463	7.898	8.350
31	34.70	38.51	42.70	74	7.217	7.630	8.059
32	33.34	36.95	40.92	75	6.980	7.372	7.778
33	32.03	35.46	39.22	76	6.752	7.123	7.508
34	30.78	34.03	37.60	77	6.532	6.884	7.249
35	29.59	32.68	36.05	78	6.320	6.654	7.000
36	28.45	31.38	34.58	79	6.116	6.432	6.759
37	27.36	30.14	33.17	80	5.919	6.219	6.529
38	26.31	28.95	31.83	81	5.732	6.017	6.310
39	25.31	27.82	30.54	82	5.553	5.823	6.101
40	24.35	26.73	29.32	83	5.379	5.636	5.899
41	23.44	25.70	28.15	84	5.212	5.455	5.704
42	22.56	24.71	27.03	85	5.051	5.281	5.517

Temp(°C)	Rmin(KΩ)	Rnor(KΩ)	Rmax(KΩ)	Temp(°C)	Rmin(KΩ)	Rnor(KΩ)	Rmax(KΩ)
86	4.895	5.113	5.336	133	1.242	1.317	1.394
87	4.745	4.952	5.163	134	1.210	1.283	1.360
88	4.600	4.796	4.995	135	1.178	1.251	1.326
89	4.460	4.645	4.834	136	1.148	1.219	1.294
90	4.325	4.500	4.679	137	1.118	1.189	1.262
91	4.194	4.360	4.529	138	1.089	1.159	1.232
92	4.068	4.225	4.384	139	1.061	1.130	1.202
93	3.946	4.095	4.245	140	1.034	1.102	1.173
94	3.829	3.969	4.111	141	1.008	1.075	1.145
95	3.715	3.847	3.981	142	0.983	1.048	1.118
96	3.605	3.730	3.856	143	0.958	1.023	1.091
97	3.499	3.617	3.736	144	0.934	0.998	1.065
98	3.396	3.508	3.620	145	0.910	0.974	1.040
99	3.297	3.402	3.507	146	0.888	0.950	1.016
100	3.201	3.300	3.399	147	0.866	0.927	0.992
101	3.104	3.203	3.302	148	0.844	0.905	0.969
102	3.010	3.109	3.208	149	0.823	0.883	0.946
103	2.920	3.018	3.117	150	0.803	0.862	0.924
104	2.832	2.930	3.029	151	0.784	0.842	0.903
105	2.748	2.845	2.944	152	0.765	0.822	0.883
106	2.666	2.763	2.861	153	0.746	0.803	0.863
107	2.587	2.684	2.782	154	0.728	0.784	0.843
108	2.511	2.607	2.704	155	0.711	0.766	0.824
109	2.438	2.533	2.630	156	0.694	0.748	0.806
110	2.366	2.461	2.557	157	0.678	0.731	0.788
111	2.298	2.392	2.487	158	0.662	0.714	0.770
112	2.231	2.324	2.419	159	0.646	0.698	0.753
113	2.167	2.259	2.354	160	0.631	0.682	0.736
114	2.105	2.196	2.290	161	0.616	0.666	0.720
115	2.044	2.135	2.228	162	0.602	0.651	0.704
116	1.986	2.076	2.168	163	0.588	0.637	0.689
117	1.930	2.019	2.110	164	0.574	0.622	0.674
118	1.875	1.964	2.054	165	0.561	0.609	0.659
119	1.823	1.910	2.000	166	0.548	0.595	0.645
120	1.771	1.858	1.947	167	0.536	0.582	0.631
121	1.723	1.808	1.896	168	0.523	0.569	0.618
122	1.675	1.760	1.847	169	0.512	0.556	0.605
123	1.629	1.713	1.800	170	0.500	0.544	0.592
124	1.585	1.668	1.753	171	0.489	0.532	0.579
125	1.542	1.624	1.708	172	0.478	0.521	0.567
126	1.500	1.581	1.665	173	0.467	0.510	0.555
127	1.460	1.540	1.623	174	0.457	0.499	0.543
128	1.421	1.500	1.582	175	0.447	0.488	0.532
129	1.383	1.461	1.542	176	0.437	0.477	0.521
130	1.346	1.423	1.503	177	0.427	0.467	0.510
131	1.310	1.387	1.466	178	0.418	0.457	0.500
132	1.276	1.351	1.429	179	0.409	0.448	0.489

Temp(°C)	Rmin(KΩ)	Rnor(KΩ)	Rmax(KΩ)	Temp(°C)	Rmin(KΩ)	Rnor(KΩ)	Rmax(KΩ)
180	0.400	0.438	0.479	206	0.234	0.260	0.289
181	0.391	0.429	0.470	207	0.229	0.255	0.284
182	0.383	0.420	0.460	208	0.225	0.250	0.278
183	0.375	0.411	0.451	209	0.220	0.245	0.273
184	0.367	0.403	0.442	210	0.216	0.241	0.268
185	0.359	0.395	0.433	211	0.212	0.236	0.263
186	0.352	0.387	0.425	212	0.208	0.232	0.259
187	0.344	0.379	0.416	213	0.204	0.228	0.254
188	0.337	0.371	0.408	214	0.200	0.223	0.249
189	0.330	0.364	0.400	215	0.196	0.219	0.245
190	0.323	0.356	0.392	216	0.192	0.215	0.241
191	0.317	0.349	0.385	217	0.189	0.211	0.236
192	0.310	0.342	0.377	218	0.185	0.207	0.232
193	0.304	0.335	0.370	219	0.182	0.204	0.228
194	0.298	0.329	0.363	220	0.178	0.200	0.224
195	0.291	0.322	0.356	221	0.175	0.196	0.220
196	0.286	0.316	0.349	222	0.172	0.193	0.216
197	0.280	0.310	0.342	223	0.169	0.190	0.213
198	0.274	0.304	0.336	224	0.166	0.186	0.209
199	0.269	0.298	0.330	225	0.163	0.183	0.206
200	0.263	0.292	0.323	226	0.160	0.180	0.202
201	0.258	0.286	0.317	227	0.157	0.177	0.199
202	0.253	0.281	0.311	228	0.154	0.174	0.195
203	0.248	0.275	0.306	229	0.151	0.171	0.192
204	0.243	0.270	0.300	230	0.149	0.168	0.189
205	0.238	0.265	0.294				